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An ontological model for a free non-relativistic scalar quantum particle

I present an intuitive heuristic approach that promises a derivation of the quantum formalism. It employs a well-known feature of the quantum theory - that an observed system and “its” measuring apparatus seem to form a single entity in some very specific sense. I realize this aspect through turning away from the orthodox reductionism and stressing the role of structures (in general, not only in measurements). Many typically quantum features emerge in the model. In particular,
_ one can describe measurement as a dynamical process, not different in nature than the rest of interactions, as defined here,
_ a formal object resembling the quantum state arises,
_ considered observables, i.e. position and momentum, are emergent and there is complementarity between them,
_ the quantum stochasticity turns out to have an ensemble-like origin.
The model describes a single spinless particle, not immersed in any classical field. Comments regarding the multi-particle case as well as non-locality are also made.

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